

RESIDUE MANAGEMENT, NO-TILL/STRIP TILL/DIRECT SEED

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 329



RESIDUE MANAGEMENT, NO-TILL, STRIP TILL AND DIRECT SEED

This practice is managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round. Crops are planted and grown in narrow slots or tilled strips established in the untilled seedbed of the previous crop.

PRACTICE INFORMATION

The objective of this practice is to maintain most of the crop residue on the soil surface throughout the year. The practice may be referred to as no-till, zero till, slot plant, row till, strip till or just the generic term conservation tillage. The common characteristic of this practice is that the only tillage performed is a very narrow strip prepared by coulters, sweeps, or similar devices attached to the front of the planter.

Weeds and other pests are generally managed by using agriculture chemicals. The chemicals used are approximately the same as those used with a tillage based system, but a “no-till” residue management system requires a higher level of technology and management than a more conventional tillage system. The fields must be scouted on a regular basis and the farm operator

must be very familiar with the pests and understand the concept of threshold populations and other integrated pest management technologies.

The benefits of this practice are significant. Erosion is usually reduced to an acceptable level due to the protective residue left on the surface. Soil organic matter increases, and soil organisms, such as earthworms, increase progressively. The soil tilth improves, and productivity increases as the constant supply of organic material left on the surface is decomposed by a healthy population of soil organisms.

COMMON ASSOCIATED PRACTICES

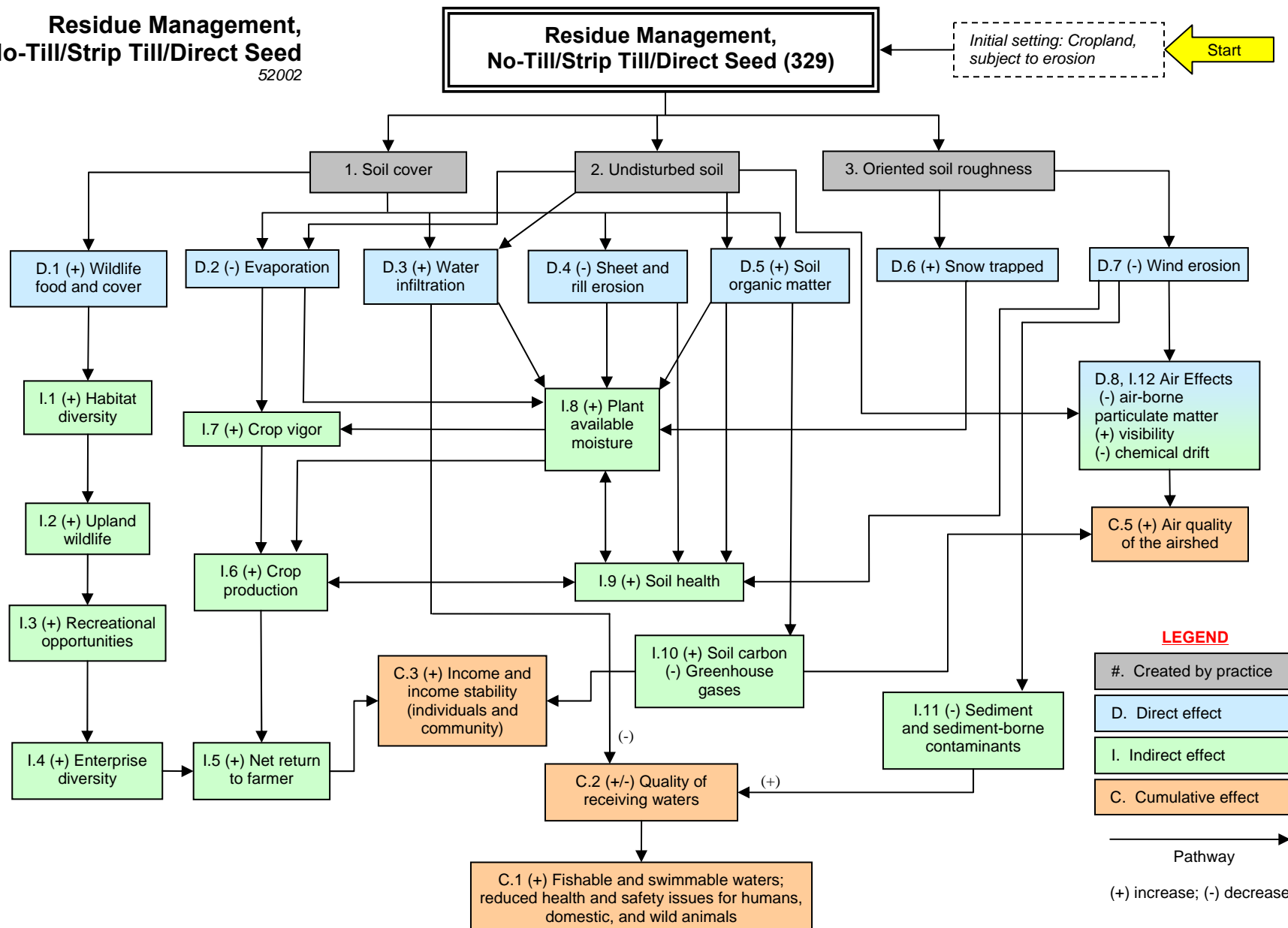
Residue Management, No-Till/Strip Till/Direct Seed is commonly used in a Conservation Management System with practices such as Conservation Crop Rotation (328), Nutrient Management (590), Pest Management (595), and Irrigation Water Management (449).

For more information, refer to the practice standard in the NRCS Field Office Technical Guide and associated specifications and design criteria.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

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Note: Effects are qualified with a plus (+) or minus (-). These symbols indicate only an increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial or adverse.

The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.